SECTION 4

Quality of care in the Medicare program

Chart 4-1. Hospital mortality decreased from 2000 to 2004

Diagnosis or procedure	Risk-adjusted rates per 10,000			Percent change 2000–2004	Number of cases in 2004
	2000	2002	2004		
In-hospital mortality					
Pneumonia	1,012	949	789	−22.0%	66,100
AMI	1,414	1,309	1,110	–21.4	36,548
Stroke	1,212	1,159	1,019	−15.9	34,387
CHF	541	474	358	–33.9	35,218
GI hemorrhage	400	355	264	–34.0	10,365
CABG	482	427	355	–26.4	7,119
Craniotomy	986	930	814	–17.4	3,281
AAA repair	1,161	1,130	956	–17.7	1,595
30-day mortality					
Pneumonia	1,377	1,557	1,452	5.5	118,367
AMI	1,627	1,690	1,570	–3.5	50,839
Stroke	1,620	1,807	1,767	9.1	57,128
CHF	818	907	834	2.0	72,265
GI hemorrhage	590	649	587	–0.5	20,593
CABG	441	412	366	–17.1	7,078
Craniotomy	1,123	1,182	1,094	–2.6	4,321
AAA repair	1,069	1,072	912	–14.7	1,534

Note: AMI (acute myocardial infarction), CHF (congestive heart failure), GI (gastrointestinal), CABG (coronary artery bypass graft), AAA (abdominal aortic aneurysm). Rate is for discharges eligible to be counted in the measure.

Source: MedPAC analysis of MedPAR discharges using Agency for Healthcare Research and Quality indicators and methods.

- Rates of in-hospital mortality generally decreased between 2000 and 2004 on all conditions and procedures measured. The most substantial improvements occurred for congestive heart failure, gastrointestinal hemorrhage, and coronary artery bypass graft.
- Thirty-day mortality (as measured from admission) has also generally decreased, though the rate of mortality following pneumonia, stroke, and congestive heart failure rose over the period.

Chart 4-2. Hospital processes of care improving, but many rates still low, 2001–2004

Indicator	Average state rate: Baseline 2001 Q1–Q3	Average state rate: 2004 Q4	Difference
AMI			
Aspirin at arrival	81.4%	87.6%	6.2%
Aspirin prescribed at discharge	84.0	91.8	7.8
ACEI or ARB for LVSD* **	63.5	71.6	8.1
Adult smoking cessation advice/counseling	42.2	74.7	32.5
Beta blocker prescribed at discharge	71.1	90.7	19.6
Beta blocker at arrival	61.4	82.3	20.9
Mean time to thrombolysis (in minutes)	N/A	58.5	N/A
Thrombolytic agent received within 30 minutes of hospital arrival	28.9	37.7	8.8
Mean time to PCI (in minutes)	N/A	196.5	N/A
PCI received within 120 minutes of hospital arrival	29.2	56.2	27.0
Heart failure			
Discharge instructions	3.8	20.7	16.9
LVF assessment	70.2	83.8	13.6
ACEI or ARB for LVSD* **	68.3	65.8	–2.5
Adult smoking cessation advice/counseling	29.1	59.7	30.6
Pneumonia			
Initial antibiotic received within 4 hours of hospital arrival	61.5	71.0	9.5
Initial antibiotic selection for community-acquired pneumonia in immunocompetent patient	58.9	75.0	16.1
Blood culture performed within 24 hours prior to or after hospital arrival	63.7	71.9	8.2
Blood culture performed before first antibiotic received in hospital	81.1	83.8	2.7
Influenza vaccination	13.8	43.8	30.0
Pneumococcal vaccination	16.5	50.1	33.6
Adult smoking cessation advice/counseling	N/A	57.1	N/A
Oxygenation assessment	94.6	99.0	4.4
SIP			
Prophylactic antibiotic received within 1 hour prior to surgical	47.6	69.7	22.1
Prophylactic antibiotic selection for surgical patients	91.4	92.2	0.8
Prophylactic antibiotics discontinued within 24 hours after surgery	40.7	52.9	12.2

Note: AMI (acute myocardial infarction), ACEI (angiotensin-converting enzyme inhibitor), ARB (angiotensin receptor blocker), LVSD (left ventricular systolic dysfunction), LVF (left ventricular function), N/A (not available), PCI (percutaneous coronary intervention), SIP (surgical infection prevention). The rates are means of state rates.
*During this time clinicians began to use another drug therapy for this condition, replacing ACEIs in some cases.
**Measure revised to incorporate ARBs November 2004.

Source: MedPAC analysis of CMS data from the quality improvement organization program.

- The rates reflect the percentage of beneficiaries receiving clinically indicated services (100 percent is the goal on most measures). Many of the rates remain too low.
- Of the measures that had rates for both periods, 21 out of 22 improved. One of the measures (ACEI for LVSD for heart failure) may have decreased due to a change in clinical practice.

Chart 4-3. Safety of care: Adverse events affect many hospitalized beneficiaries, 2000–2004

	Risk-adjusted rates per 10,000			Difference	Observed adverse
	2000	2002	2004	2000–2004	events, 2004
Decubitus ulcer	225	251	276	51	156,961
Failure to rescue	1,450	1,330	1,114	–336	67,098
Postoperative PE or DVT	71	86	98	27	42,105
Accidental puncture/ laceration	32	36	34	2	38,258
Infection due to medical care	20	24	25	5	32,408
Iatrogenic pneumothorax	8	8	8	0	10,953
Postoperative respiratory failure	34	46	53	19	10,914
Postoperative sepsis	97	111	131	34	8,600
Postoperative hemorrhage or hematoma	20	17	17	–3	7,365
Postoperative physiologic and metabolic derangement	5	6	8	3	2,643
Postoperative wound dehiscence	14	15	12	–2	1,911
Postoperative hip fracture	3	3	3	0	1,127

Note: PE (pulmonary embolism), DVT (deep vein thrombosis). Rate is for discharges eligible to be counted in the measure.

Source: MedPAC analysis of 100 percent of MedPAR discharges using Agency for Healthcare Research and Quality indicators and methods.

- From 2000 to 2004, 7 of 12 rates of adverse events experienced by Medicare beneficiaries increased.
- Four of the indicators have seen decreasing rates; these include failure to rescue, one of the most common and—because it results in death—most severe.

Chart 4-4. Rates of potentially avoidable admissions, 2002−2004

	Rates per 10,000 beneficiaries		
	2002	2004	Difference
Congestive heart failure	1,054	1,085	31*
COPD/Asthma	771	710	–61
Diabetes long-term complications	191	168	–23
Diabetes short-term complications	40	31	–9
Hypertension	10	10	0
Unstable angina/ED**	10	7	–3

Note: COPD (chronic obstructive pulmonary disease). ED (emergency department). The group studied excludes those under 65, those in Medicare Advantage plans, hospice users, anyone not continuously enrolled for one of two time periods (2001–2002 or 2003–2004), and those living outside the United States.
*Not a statistically significant result. All others are statistically significant at a 95 percent confidence level ($p<0.05$).
**This measures visits to the emergency department, not admissions.

Source: MedPAC analysis of 5 percent sample of beneficiaries' outpatient and inpatient claims for 2002 and 2004.

- Potentially avoidable admissions are admissions that high-quality ambulatory care has been shown to prevent. The populations measured are those with a diagnosis previous to the admission for the condition, not the overall population. For example, this table counts the percent of Medicare beneficiaries with congestive heart failure who were admitted to the hospital.
- Four out of six rates of potentially avoidable admissions (for persons with these conditions) decreased.
- Notable, given the amount of emphasis CMS and others have placed on improving diabetes care, is the decrease in potentially avoidable admissions for beneficiaries with diabetes, both for long- and short-term complications.
- Among these conditions, rates of potentially avoidable admissions are highest for congestive heart failure.

Chart 4-5. Most ambulatory care indicators show improvement or stability, 2002−2004

Indicators by condition	Number of indicators			
	Improved	Stable	Worsened	Total
All	20	15	3	38
Anemia and GI bleed	3	1	0	4
CAD	3	1	0	4
Cancer	0	4	3	7
CHF	5	3	0	8
COPD	2	0	0	2
Depression	0	1	0	1
Diabetes	6	1	0	7
Hypertension	0	1	0	1
Stroke	1	3	0	4

Note: GI (gastrointestinal), CAD (coronary artery disease), CHF (congestive heart failure), COPD (chronic obstructive pulmonary disease).

Source: MedPAC analysis of Medicare Ambulatory Care Indicators for the Elderly from the Medicare 5 percent Standard Analytic Files.

- The Medicare Ambulatory Care Indicators for the Elderly (MACIEs) track the provision of necessary care and rates of potentially avoidable hospitalizations.
- Out of 38 indicators, 20 improved, 15 did not change, and 3 worsened from 2002 to 2004.
- This finding suggests that in 2004 beneficiaries with these conditions were somewhat more likely to receive necessary care and avoid hospitalizations.
- For several conditions, declines in potentially avoidable hospitalizations occur concurrently with the provision of necessary clinical care for that condition.

Chart 4-6. Patient-centeredness of care: Beneficiaries rate interactions with health care providers highly

Question	2000	2002	2004
Do you have a personal doctor or nurse? Yes	N/A	89.0%	90.0%
Care *(Percent who rated provider 8 or higher on a scale of 0 to 10)*			
How would you rate your personal doctor or nurse?	84.7%	83.7	84.7
How would you rate the specialist you saw most often in the last 6 months, including a personal doctor if he or she is a specialist?	85.5	84.4	85.1*
How would you rate all the health care you got in the last 6 months from all doctors and other health providers?	85.4	85.2	86.4*
Quality of interactions			
In the last 6 months, how often did doctors or other health providers:			
Usually or always listen carefully to you?	94.8	94.6	94.6*
Usually or always explain things in a way you could understand?	93.4	93.8	93.9*
Usually or always show respect for what you had to say?	94.9	94.8	94.8
Usually or always spend enough time with you?	91.1	90.6	90.9

Note: N/A (not available).
*Indicates a statistically significant change between 2000 and 2004, at a 95 percent confidence level ($p<0.05$).

Source: MedPAC analysis of Consumer Assessment of Health Plans Survey (CAHPS) for fee-for-service Medicare, 2000–2004.

- More than 80 percent of beneficiaries gave a rating of 8 or higher on a scale of 0 to 10 (10 being the highest) to their personal doctor or nurse and the specialist that they saw most often in the last 6 months. The same was true for all the health care they received in the last 6 months.
- They also highly rate the quality of interactions with their doctor or other health provider. For example, in 2004, between 93 percent and 95 percent of beneficiaries reported that their doctors or other health care providers usually or always listened carefully to them, explained things in a way that they could understand, and showed respect for what they had to say.

Chart 4-7. Share of home health patients achieving positive outcomes continues to increase

Measure	June 2002–May 2003	June 2003–May 2004	June 2004–May 2005
Improvement in:			
Walking around	34%	36%	38%
Getting out of bed	49	51	52
Bathing	57	60	61
Managing oral medications	35	38	39
Patients have less pain	57	59	61
Any hospital admissions	28	28	28
Any unplanned ER use	21	21	21

Note: ER (emergency room).

Source: MedPAC analysis of CMS Home Health Compare data.

- Each measure of quality from CMS's public website Home Health Compare has shown small improvement.

Chart 4-8. The quality of dialysis care has generally improved

Outcome measure	2000	2001	2002	2003
Percent of in-center hemodialysis patients:				
Receiving adequate dialysis	91%	92%	92%	94%
With anemia under control	71	75	78	81
Dialyzed with an AV fistula	30	31	33	35
Not malnourished	80	82	81	81
Percent of peritoneal dialysis patients:				
Receiving adequate CAPD	69	68	71	70
Receiving adequate CCPD	62	70	66	65
With anemia under control	75	76	81	83
Not malnourished	56	61	60	63

Note: AV (arteriovenous), CAPD (continuous ambulatory peritoneal dialysis), CCPD (continuous cycler-assisted peritoneal dialysis). Data on dialysis adequacy, use of fistulas, and anemia management represent percent of patients meeting CMS's clinical performance criteria. Not malnourished includes patients with a serum albumin $\geq$3.5/3.2 g/dL.

Source: Compiled by MedPAC from 2000–2004 *Annual Reports for ESRD Clinical Performance Measures Project* from CMS.

- The quality of dialysis care has improved on these measures. Between 2000 and 2003, the proportion of both hemodialysis and peritoneal patients receiving adequate dialysis and whose anemia was under control increased.

- Nutritional care is a clinical area in which substantial improvements in quality are needed. The proportion of hemodialysis and peritoneal dialysis patients who are malnourished has remained relatively constant during this time.

- All hemodialysis patients require vascular access—the site on the patient's body where blood is removed and returned during dialysis. Vascular access care is another clinical area in which substantial improvements in quality are needed. Use of arteriovenous (AV) fistulas, considered the best type of vascular access, increased from 30 percent to 35 percent of hemodialysis patients between 2000 and 2003. However, this rate still falls short of recommended care. Clinical guidelines recommend that at least 40 percent of all hemodialysis patients have an AV fistula.

Chart 4-9. Changes in safety of care for long-term care hospital patients, 2003–2004

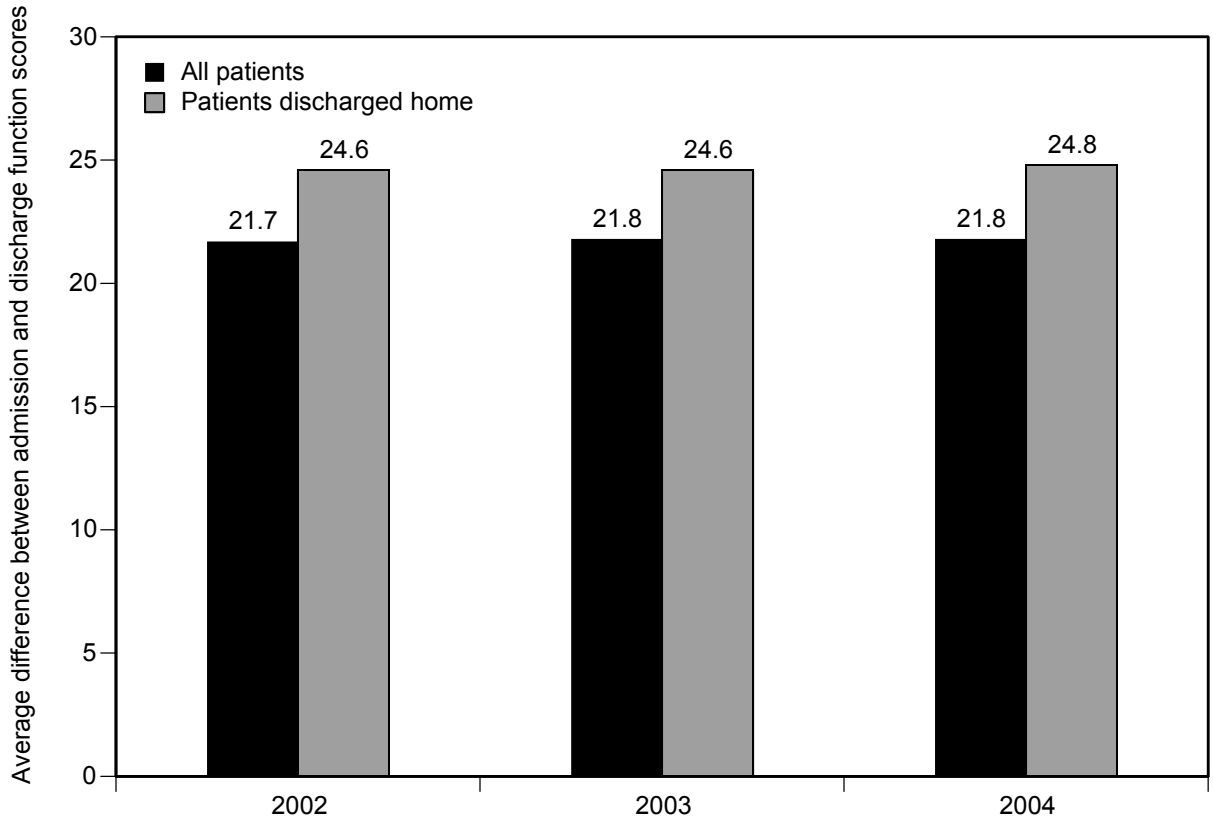
Patient safety indicator	Risk-adjusted rates per 1,000 eligible discharges			Observed adverse events 2004	Total number of patients
	2003	2004	Change in rate		
Decubitus ulcer	128.6	148.3	15%	14,624	94,368
Infection due to medical care	19.9	28.9	45	3,129	108,458
Postoperative PE or DVT	53.5	54.1	1	747	13,801
Postoperative sepsis	125.3	164.0	31	1,378	8,016

Note: PE (pulmonary embolism), DVT (deep vein thrombosis).

Source: MedPAC analysis of 100 percent of long-term care hospital MedPAR data from CMS.

- These rates suggest that for three of the four patient safety indicators (PSIs), safety for long-term care hospital (LTCH) patients has deteriorated. The rates for all four indicators increased from 2003 to 2004.
- Nevertheless, we need to be cautious about interpretation of the PSIs since they were not developed for LTCHs.
- We used selected PSIs developed by the Agency for Healthcare Research and Quality to assess potentially avoidable adverse events resulting in acute hospital care for patients treated in LTCHs in 2003 and 2004. These PSIs had enough observations for the two years and were thought to be relevant to the type of care LTCHs deliver.
- To distinguish patients who developed a PSI diagnosis in the LTCH, we included in the analysis only patients who did not have the pertinent diagnosis in the acute care hospital. Therefore, changes in these rates should not be a result of LTCHs admitting more patients who had these conditions in the acute care hospital.
- The PSIs are risk adjusted so these indicators should not reflect a changing LTCH patient population over time.

Chart 4-10. IRF patients' improvement in function has remained stable



Note: IRF (inpatient rehabilitation facility). CMS changed instructions on how IRFs should measure patients' functioning at discharge as of April 1, 2004; therefore, data reflect measurement before that date.

Source: MedPAC analysis of IRF–Patient Assessment Instrument data from CMS.

- Our indicators of the quality of care—average difference between admission and discharge function scores—provided by inpatient rehabilitation facilities shows small improvement from 2002 to 2004.

Chart 4-11. Medicare Advantage plans improve, but rates are still low on some measures, 2001–2004

Measure	2001	2002	2003	2004
Advising smokers to quit	60.8%	61.5%	63.3%	64.7%*
Beta-blocker treatment after heart attack	92.9	93.0	92.9	94.0
Breast cancer screening	75.3	74.5	74.0	74.0
Cholesterol management				
Control	58.4	62.3	66.7	69.8*
Screening	75.5	77.7	81.0	82.1*
Controlling high blood pressure	53.6	56.9	61.4	64.6*
Comprehensive diabetes care				
Eye exams[a]	66.0	68.4	64.9	67.1
HbA1c testing	85.7	85.0	87.9	89.1*
Lipid control	57.5	62.6	67.7	71.4*
Lipid profile	85.7	87.9	91.1	93.5*
Monitoring diabetic nephropathy	51.9	57.3[c]	53.6	58.5*
Poor HbA1c control[b]	26.8	24.5	23.4	22.5*
Antidepressant medication management[c]				
Acute phase	51.3	52.1	53.3	56.3*
Continuation phase	36.8	37.7	39.2	42.1*
Contacts	11.9	10.8	10.5	11.9
Follow-up after hospitalization for mental illness				
Less than 7 days	37.2	38.7	38.8	40.2
Less than 30 days	60.6	60.6	60.3	60.7

Note: HbA1c (hemoglobin A1c). Rates refer to patients for whom the treatments were clinically indicated.
* The changes between 2001 and 2004 on these indicators are statistically significant.
[a] The definition of these measures changed in 2003, making comparisons difficult.
[b] Lower rates are better than higher ones for this measure.
[c] Acute phase refers to the percent of patients receiving effective treatment after a new episode. Continuation refers to the percent of patients remaining on antidepressant continuously for six months after initial diagnosis. Contacts refers to the percent of patients who received at least 3 follow-up office visits in a 12-week acute phase.

Source: National Committee For Quality Assurance 2005, The State of Health Care Quality. Washington, DC: NCQA.

- Twelve out of the 17 measures improved between 2001 and 2004. Changes in four were not statistically significant and one remained at the same rate.
- Because many Medicare beneficiaries in Medicare Advantage plans are still not receiving clinically indicated services, opportunities for further improvement exist.

Chart 4-12. MA and FFS patient experience scores are similar

	MA			FFS		
Measure	2002	2003	2004	2002	2003	2004
No or small problem getting care when needed	93%	94%	95%	95%	95%	96%
Usually or always got care without long waits	81	83	83	81	84	83
Doctors in health plan usually or always communicate well	93	93	93	94	94	93
None or small problem seeing a specialist	92	92	93	95	95	94
Rated health care overall 8–10	84	84	84	85	86	86
Rated health plan 8–10	76	70	74	77	69	72

Note: MA (Medicare Advantage), FFS (fee-for-service). The ratings on the last two indicators show the percentage of beneficiaries who gave ratings of 8 or higher on a scale of 0 to 10.

Source: 2002–2004 Consumer Assessment of Healthcare Providers and Systems (CAHPS) data for Medicare Advantage plans and the fee-for-service program from CMS.

- Fee-for-service (FFS) beneficiaries were asked to rate Medicare as a health plan, while Medicare Advantage (MA) beneficiaries were asked to rate the plan in which they were enrolled.
- Beneficiaries' ratings of satisfaction with FFS and MA are generally similar and are stable over time.
- Most beneficiaries report obtaining care when they need it and do not report long waits.

Web links. Quality of care in the Medicare program

- Chapter 2 of the MedPAC June 2006 Report to the Congress discusses care coordination for Medicare beneficiaries and its implications for quality of care.

  http://www.medpac.gov/publications/congressional_reports/Jun06_Ch02.pdf

- Chapter 2 of the MedPAC March 2006 Report to the Congress includes further information on quality in hospitals and outpatient dialysis services.

  http://www.medpac.gov/publications/congressional_reports/Mar06_Ch02.pdf

- Chapter 4 of the MedPAC March 2006 Report to the Congress includes further information on quality in skilled nursing facilities, home health agencies, long-term care hospitals, and inpatient rehabilitation facilities.

  http://www.medpac.gov/publications/congressional_reports/Mar06_Ch04.pdf

- Chapter 4 of the MedPAC March 2005 Report to the Congress outlines strategies to improve care through pay-for-performance incentives and information technology.

  http://www.medpac.gov/publications/congressional_reports/Mar05_Ch04.pdf

- Chapter 2 of the MedPAC March 2004 Report to the Congress includes and discusses in further detail information similar to that included in many of these charts.

  http://www.medpac.gov/publications/congressional_reports/Mar04_Ch2.pdf

- The CMS website provides further information on CMS quality initiatives, including those for dialysis care.

  http://cms.hhs.gov/quality

- More information about Medicare's quality initiatives for dialysis care can be found on the CMS website.

  http://www.cms.hhs.gov/ESRDqualityImproveInit/

- Medicare provides information about home health agency outcomes on its consumer website.

  www.medicare.gov/Hhcompare/Home.asp

- The Commonwealth Fund published a chart book with information on Medicare quality in the spring of 2005.

  http://www.cmwf.org